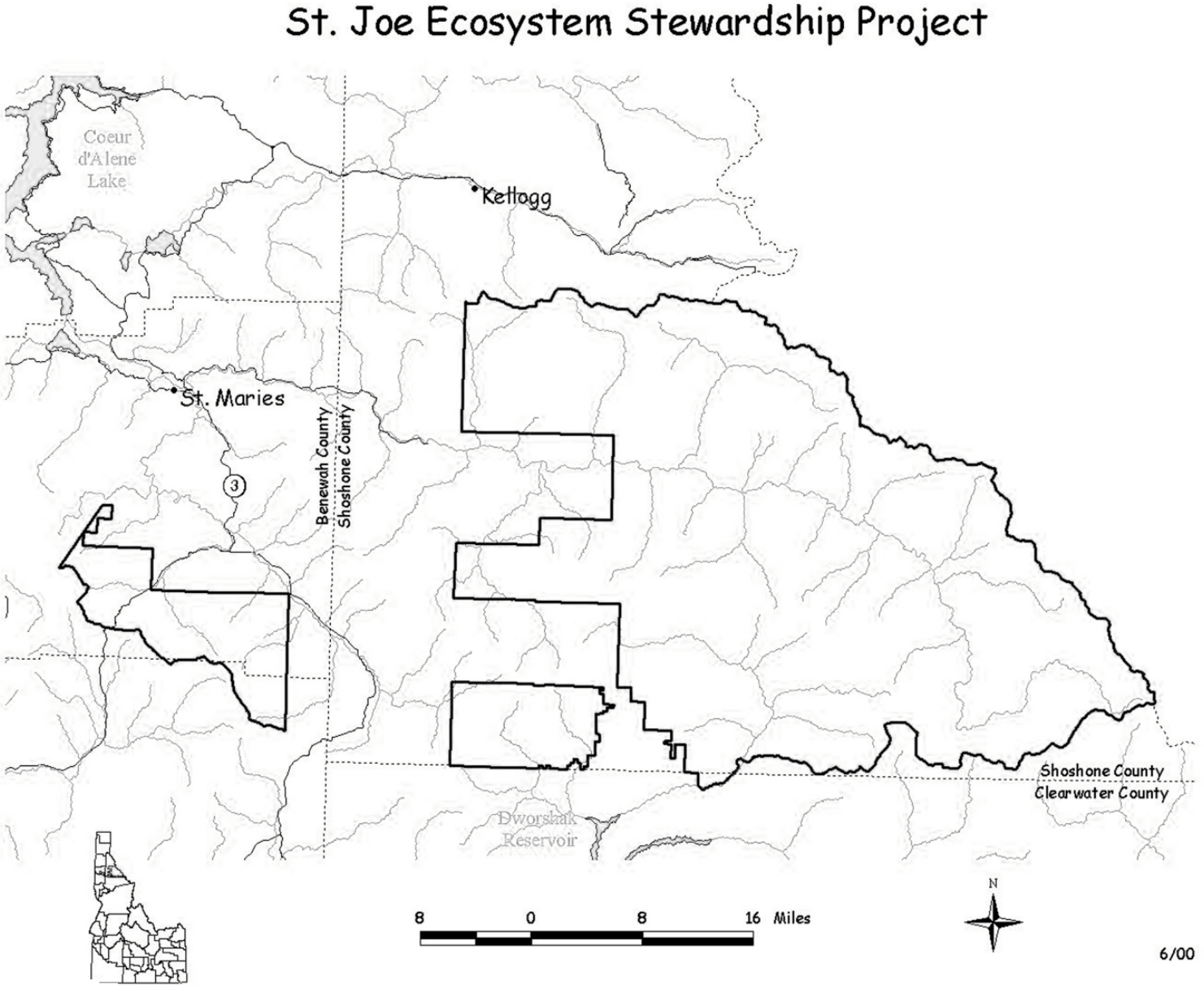
The St. Joe Ecosystem Stewardship Project

Submitted to:
Idaho Federal Lands Task Force Working Group


St. Joe Ecosystem Stewardship Project
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Kellogg
St. Maries
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Dworshak Reservoir
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TABLE OF CONTENTS

Introduction

St. Joe Ecosystem Stewardship Project will use Land Stewardship contracts (Public Law 105-277) for all resource management activities. Historically dominate species such as white pine, larch, and ponderosa pine would be restored. Forage for elk and other big game species would be increased. Contracts would generate revenue through activities such as thinning overcrowded forest stands. Some revenues would support local governments, and some revenues would be made available to fund activities that do not generate revenue, such as watershed improvements. A local monitoring group and an "Investment Project Advisory Committee" would oversee all resource management activities.

St. Joe Ecosystem Stewardship Project

Area: 726,000 acres; St. Joe District, Idaho Panhandle National Forest

Goal: Restore and enhance socially determined ecological conditions by conducting all resource management activities through stewardship contracts consistent with the "Stewardship" law passed by Congress in 1998. Since 1992 Interior appropriations have continued authorization for contracts that will use all or part of the revenues received for timber removed as an offset against the cost of Stewardship services(i.e. goods for services). Identified services include site preparation, replanting, recreation, wildlife habitat enhancement, and other multiple use improvement.

All the models of new approaches for the management of federal lands developed by the Federal Lands Task Force have common elements in each of the proposed pilot projects. First, each creates a group to oversee the management of the federal lands; this can take the form of a board of trustees, a collaborative group, or a Citizen Advisory Committee. Second, all receipts from the activities of the operation of the trust, collaborative or cooperative, fund the project's operations with none of the revenues being returned to the federal treasury. Third, each model requires Congress to enact changes in the law that enable each of the pilot projects to be implemented.

This proposal is different because it is based upon laws that Congress has already passed. This project is similar to the other proposals presented by the Federal Lands Task Force Working Group in that a local group oversees management, monies fund the project's operations, and all the proceeds from the project stay in the local communities.

The basis for the "St. Joe Ecosystem Stewardship Project" is the "Stewardship" law enacted by Congress in 1998. These statutes and the concepts embodied in them meet many of the objectives and recommendations of the Federal Lands Task Force. Although these new laws did not exist when the Task Force was completing its work, the laws offer the possibility of implementing some of the Task Force's recommendations without overhauling the existing statutes and policies. The St. Joe Valley Association offers this proposal as a way to capture that opportunity presented by Congress and provide a demonstration of good stewardship on the land.

The objective of the proposal is to conduct all resource management on the St. Joe District through Stewardship contracts. The area would be managed based upon a plan designed to meet the landscape needs within the project area. Ecological management strategies would be implemented on a basin-wide approach. Ecological considerations include:

- ? Restoring habitat for bull trout through watershed restoration so species can fully utilize the aquatic habitat in the forest.
- ? Managing vegetation and direct silvicultural activities to restore ponderosa pine, western white pine, western larch, and minimize the risk of unnaturally severe fires due to overstocked and crowded stands.
- ? Evaluating and creating habitat for threatened or endangered species through implementation of ecologically sound methods, instituting careful logging practices that would minimize impacts on the land, and providing an economical means of thinning the overstocked stands which contribute to the high wildfire risk.
- ? Using prescribed fire to reduce fuel loads and improve wildlife habitat through vegetative management.
- ? Managing for species, age classes, and appropriate habitats through harvesting methods that encourage long-term sustainability of soil, land, and water resources.

Contracts that generate revenue from management practices provide those revenues to support local governments and are available for other projects, such as watershed improvements. A monitoring committee of local citizens and a forest level "Project Advisory Committee" will oversee the pilot project to ensure the ecological objectives are being met both in the planning stages and on the ground.

The St. Joe—Current Ecosystem Conditions

The St. Joe District of the Panhandle National Forest was an early participant in ecosystem planning. In 1997, largely before other forests began to think in terms of an ecosystem-based revision of their forest plans, the St. Joe developed "An Interim Ecosystem Management Framework" to bridge the gap between the current forest plan and the new findings coming from the Interior Columbia Ecosystem Management Project. This effort evolved into the "geographical assessment" for the St. Joe area, published in 1997. This information will be used to guide the management in the project area.

Like most subsequent ecosystem assessments, the St. Joe version identified the current ecological condition and identified the desired future condition. As is true for many forests in the Inland Northwest, current conditions in the St. Joe District reflect a past that is influenced by a combination of natural and human factors. The condition of the ecosystem can be addressed in two broad areas: aquatic and terrestrial. The aquatic and terrestrial aspects are well documented in the report "Interim Ecosystem Management Framework" and the subsequent work "Toward a Forest Ecosystem Approach: An Assessment for the St. Joe Area." These papers prepared by the staff of the Panhandle National Forest in 1997 provide new direction and a framework to blend the present plan with the most recent scientific information on ecosystem processes within the project area. The findings of both will not be repeated for this proposal, but a summary of the major conditions will be incorporated.

General

The St. Joe area encompasses 726,000 acres, which is in national forest ownership. Approximately 25% of the total land area is currently in roadless designation (1997), with roadless lands comprising 48% of the national forest ownerships, or 348,000 acres. Two major river are in the St. Joe sub-basin: the St. Joe River and its major tributary, the St. Maries River. The southern portion of the area includes the headwater streams of the Little North Fork of the Clearwater River, which drains to the south into Dworshak Reservoir.

Several natural factors combine to make the St. Joe area highly productive and rich in biological diversity. Moist, warm marine airflow meets the drier air masses of the northern Rocky Mountains. The high amounts of precipitation coupled with fertile volcanic ash cap soils produce a diverse array of plants and animals. In fact, the St. Joe area has some of the most productive and biologically diverse lands in the entire interior Columbia River Basin.

Of the ten small towns within the St. Joe sub-basin, all but three are traditionally dependent upon the forest industry to support their economies. The communities have maintained their economic and social stability during the past fifty years primarily from federal timber, with some state and private timber adding to the stability of the St. Joe sub-basin. While the area includes portions of three counties, it tends to function as a single economic and social entity. St. Maries is the commercial and social center for the St. Joe sub-basin. The population of St. Maries is approximately 2,700, and the entire population of the St. Joe sub-basin likely doesn't exceed 5,000. Despite the low number of permanent residents in the project area, it is important to note that well over 500,000 people live within seventy-five miles of the St. Joe sub-basin in the communities of Spokane, Washington, and Coeur d'Alene, Idaho. These communities and the surrounding counties are some of the fastest growing areas in the country. These residences place an unexpected increase on the recreational facilities and resources on the St. Joe Basin.

Aquatic Habitats

The aquatic ecosystem of the St. Joe area is characterized as "breaklands" with steep slopes that drop off of gentle ridge tops to the many streams that bisect the area. These lands are susceptible to mass erosion (landslides) as well as sedimentation from normal runoff. Combined with this naturally erosive state are the historic large fires in the area and past land uses, including road construction, that need to be addressed. When fires remove vegetation or when roads are poorly located and constructed, the high rainfalls, especially rain on snow events, and geologic conditions take their toll. Landslides and erosion problems are common in the St. Joe sub-basin if management activities not carefully planned and implemented.

In the past, human activity and natural events have impacted the rich native fisheries of the St. Joe area. Consider the comment included in "Timber Down the Mountain" (Blake, 1971) regarding fishing in Marble Creek, "…I have never seen trout fishing, from Canada to California, half as good as the fishing in Marble Creek before the log drives." While the upper reaches of the St. Joe River and its tributaries may still offer the kind of fishing that Blake remembered, the log drives, mining, grazing, large road systems, and introduction of non-native fish species all have had impacts in the more developed watersheds. Today fish populations persist, and while Blake might not find "great" fishing in the St. Joe area, good

fishing can be found in the St. Joe River and its tributaries. The area is utilized by thousands of fisherman annually.

Terrestrial Habitats

Past human actions have impacted terrestrial and aquatic habitats. Prior to European settlement, the lands within the area were characterized by large stands of fire tolerant trees. These trees, while old, still represented early successional stages of forest development. Tree species common in these "old" seral forests were western white pine and western larch in the wetter habitat types and ponderosa pine on the drier sites. These trees commonly lived for 200-400 years, even though fires commonly burned through the area on a much shorter cycle. A stand replacing fire would occur on average every nineteen years in some portion of the St. Joe sub-basin. This frequent fire cycle favored the development of large, fire tolerant, early successional tree species and discouraged thin barked, shade tolerant, late successional tree species.

Two human actions greatly altered the vegetative pattern of this area. The first action was the exposure of white pine to blister rust, an exotic disease that has decimated western white pine in the sub-basin. Much the same as chestnut blight forever altered the composition of eastern hardwood forests, blister rust has drastically reduced the frequency of occurrence of western white pine in the northern Idaho forests. Although genetic research has produced white pine progeny that is generally rust resistant, treatment of mature stands has not been successful. As a consequence, most stands of this highly valuable specie are salvaged as the white pine dies. This situation has caused a major historical component of the St. Joe's terrestrial habitat to largely disappear from the landscape.

The second major human impact on the terrestrial habitat was the advent of fire control. While blister rust was a biological phenomenon brought in by settlers, fire control was born of the political and social concerns. These concerns were surely heightened by the 1910 fire that burned about half the St. Joe sub-basin, as well as much of north Idaho and northwest Montana. Given the growing population of the area and the resource values within it, efforts to prevent and suppress all fires in the forests were inevitable. Fire suppression efforts were extremely successful in reducing both the damage and the overall numbers of wildfires each year.

Fire control and the introduction of blister rust increased late successional species in the forests of the St. Joe sub-basin. Species that could occupy the western white pine sites and were intolerant of fire replaced the large western white pine, ponderosa pine, and western larch stands across the landscape. This resulted in an increase in grand fir, Douglas-fir, lodgepole pine, and both western and mountain hemlock. Often very dense, young stands of these late successional species developed. Historically, the long-lived early seral species occupied approximately 45% of the St. Joe sub-basin. Now these same species and forest types occupy only 10 percent of the area.

These changes in forest composition have produced less diversity in the forest landscape. The stands are at risk from intensive wildfire and have a high potential for outbreaks of insects and disease problems. For example, grand fir and hemlock are drought intolerant, while Douglas-fir and grand fir are both susceptible to root rot. During droughts, these species become stressed and are more susceptible to insects or disease problems,

resulting in a high rate of mortality contributing tremendous fuels for wildfires. Also, the exclusion of fire has lead to the lodgepole pine stands living beyond their normal life span creating high fuel loads. These factors have led to an increase risk of wildfire to the St. Joe sub-basin. Catastrophic fires can have a devastating effect on the watersheds, fish, wildlife, and recreational values of the area.

Ecosystem Needs and Treatments

The discussion of the condition of the St. Joe might appear to place the blame for many of the current conditions on past human actions. The settlement of the area and the social and economic activities have affected the ecosystem. The St. Joe Valley Association recognizes, however, that these activities were methods of the time. Rather than to assess blame or assume that human actions must stop in order to make up for past practices, this proposal is based on the St. Joe Valley's belief that (1) humans are part of the St. Joe ecosystem, and (2) their future actions can create conditions that will lead to a more sustainable ecosystem.

Among the findings of the Interior Columbia Basin Ecosystem Management Plan (ICBEMP) were the groupings of all 164 sub-basins into six "clusters." Each cluster has similar management histories and conditions, along with similar needs and opportunities. The St. Joe area is classified as "forest cluster 4," characterized as a moist forest type that is highly roaded and with low terrestrial and aquatic integrity. This cluster has risks to its ecological integrity, including the potential for fire, the ability to maintain older forest structures in managed areas, and susceptibility to insects and disease.

ICBEMP also identified opportunities to reduce those risks. In general some of these options include:

- Restoration of older forest structures in managed areas,
- Connection of aquatic strongholds through restoration, and,
- Treatment of forested areas to reduce fire, insect, and disease susceptibility.

These recommendations are guidelines and not particularly specific. The St. Joe Ranger District staff, however, turned these general recommendations into very specific proposed objectives and management priorities in "An Interim Ecosystem Management Framework." They are summarized in the following table:

Achieving Ecosystem Needs in the St. Joe Area

Ecosystem Needs	Treatments to Produce the Desired Outcome
Aquatic Habitats	
Increase pool quality characteristics and lateral fish habitat	Build in-stream structures to create pools and manage riparian zones for the recruitment of large woody debris
Reduce road densities on sensitive land types	Obliterate roads within breaklands or reconstruct those which are to remain system roads
Reduce the mileage of roads within riparian areas	Obliterate roads along streams and relocate them upslope if they are to remain system roads
Reduce roads that are built on slash	Obliterate or reconstruct these roads. Relocate necessary roads on stable slopes and roadbeds
Terrestrial Habitats	
Reduce the extent of lodgepole pine and replace with more resilient long-lived seral species	Use small clearcuts in lodgepole stands and replant with rust resistant white pine, larch, or ponderosa pine. Thin stands to favor these species where they are already established.
Restore dry site, open forest types	Thin established ponderosa pine, larch, and Douglas-fir types to remove shade tolerant understory species.
Accelerate the development of large, early seral trees	Commercially thin stands from 1910-1930 era fires to favor larch, ponderosa, or white pine.
Promote white pine and other early seral, long-lived species	Use shelterwoods or clearcuts with reserves and plant rust-resistant white pine, particularly on sites where root rot and mountain pine hazard is high or where stands are moving toward more fire intolerant, short-lived species.

These specific objectives and management priorities provide direction for the Forest Stewardship Contracting project. The identified treatments implemented on a basin-wide approach will direct management to produce the desired outcome. This process begins with ecosystem management, and, through effective monitoring, specific management prescriptions can be tailored to meet the vegetative and habitat requirements of the species and to restore the basin.

Current and Potential Economic Benefits

Revenue and Expense Summaries

Existing Proforma Panhandle National Forest, St Joe Ranger District

Revenues generated from land management operations
1996-1999 Average Treatment Acres and Values

Timberland 1044 treated acres	$2,090,000	
Recreation Fees	---	
Minerals	---	
Grazing fees	---	
TOTAL	$2,090,000	$2,090,000

Expense Projected for Operations 2000

Timberlands		
Fire	$642,920	
Planning	---	
Timber Sales	$68,044	
Reforestation	$802,700	
Recreation	$1,166,064	
Minerals	$49,380	
Grazing	$248,742	
Heritage Resources	---	
Wildlife	$68,521	
*Noxious Weed Control	$15,000	
Soil & Water	$243,935	
Roads	$262,500	
Administration/Misc	$1,370,037	
TOTAL	$4,937,843	($4,937,843)

Total revenues available less expense for operations	($2,847,843)

The St. Joe budget and personnel for the proposal are expected to remain at present levels. Recreation, minerals, and grazing fees are minimal on the District.

*The Idaho Panhandle National Forest's 1998 summary of noxious weeds identified 248,800 acres making the IPNF one of the top three National Forests requiring large scale weed control efforts. Approximately 1800 acres are treated annually.

Potential Pilot Proforma

St Joe District
Revenues generated from land management operations
PILOT Proforma

Timberland 1978 treatment acres	$3,960,000	
Recreation Fees	---	
Minerals	---	
Grazing fees	---	
TOTAL	$3,960,000	$3,960,000

Expense Projected for Operations 2000

Timberlands		
Fire	$642,920	
Planning	$0	
Timber Sales	$68,044	
Reforestation	$802,700	
Recreation	$1,166,064	
Minerals	$49,380	
Grazing	$248,742	
Heritage Resources	$0	
Wildlife	$68,521	
*Noxious Weed Control	$30,000	
Soil & Water	$243,935	
Roads	$262,500	
Resource Monitoring	$69,251	
Administration/Misc	$1,315,786	
TOTAL	$4,967,843	($4,967,843)

Total revenues available less expense for operations	($1,007,843)

*Noxious weed control funding is at twice the present level and is necessary to protect native species and habitats.

The Potential Pilot Proforma assumes the St Joe Ranger District budget will remain at existing levels, and no personnel changes are expected. Recreation, mineral, and grazing revenues are insignificant on these districts.

The St. Joe has traditionally been a “timber” district. As recently as 1993, the Avery and St. Maries Districts (now the St. Joe) planned to offer over 60 million board of timber sales, approximately one-third of the Panhandle National Forest’s 198 million board feet of timber sales for that year. Plans, however, fell short and the St. Joe’s timber sales dropped drastically.

Summary of St. Joe Timber Sales, 1993-1999

Year	*Volume Planned Or Offered* (MMBF)*	*Volume Sold (MMBF)*	*Volume Harvested (MMBF)*
1993	64.7	18.7	36.1
1994	22.4	1.0	23.7
1995	20.4	4.3	19.1
1996	50.8	12.7	12.2
1997	14.9	14.6	12.5
1998	5.0	10.1	10.5
1999	5.5	12.5	2.7

*****_Volume planned or offered is either the "planned" volume for the years in which the Panhandle Forest produced five-year timber sale plans or the volume actually offered in later years when there were no longer-term plans._

Perhaps the biggest change in timber sales on the St. Joe has been the transition from a "program" with specific timber sale goals each year to an ecosystem-based approach where timber is a by-product of land treatments. By design, a more natural condition on the ground became the goal of the ecosystem-based management. As such, it has become very difficult to project specific timber sale offerings for the upcoming year. Rather, the scope of the ecosystem work is clearly defined, and the estimated amount of timber resulting from management becomes secondary, playing an insignificant role. Therefore, the St. Joe's "ecosystem assessment" includes large areas of lands where ecosystem needs must be addressed, but no estimates of the timber harvest volume are identified. The St. Joe Ecosystem Stewardship Project has addressed this by identifying acres that are to be treated to meet the ecosystem needs.

As each of these areas is given a priority for implementing ecosystem management objectives, the NEPA analysis begins. Planners develop an estimate of work to be performed and volume to harvest from affected acres. Currently, two NEPA analyses are underway: the North Fork of the St. Joe and the Eagle Bird areas. Treatment within the ecosystem restoration projects may include 10 million board feet from the North Fork, while Eagle Bird may produce 25 million board feet. Most of this timber would result from the prescribed silvicultural activities that include commercial thinning and small regeneration harvests designed to favor western white pine and western larch. Over the long term, forest planners estimate that to complete the needed ecosystem restoration on the St. Joe, it may require treatments on 1978 acres or more and may include 18-20 million board feet.

Comparisons

The existing Revenues and Expense Summary identifies an expenditure of $4,937,843 with revenues of only $2,090,000. This indicates a cost of $2,847,843 over and above revenues generated. As budgets decline, these costs leave little opportunity for improving recreation, heritage resources, wildlife, soil and water, and watershed restoration.

The potential treatment of 1978 acres annually is projected from the 375,000 acres on the St. Joe District that has been identified by the Forest Service as good producing timberland. An additional 348,000 acres of roadless forest are not presently being considered for management, but mortality alone on these acres could be between 20 and 30 million board feet annually. This conservative estimate of treating approximately 2000 acres annually may not be sufficient to restore and improve the large number of acres that need attention. The projected volume identified by the Forest Service does not bring the pilot project area into a positive cash flow; a deficit of $1,007,843 still remains. The St. Joe Ranger District can maintain project activities identified in the budget but does not have an opportunity to increase watershed restoration, wildlife habitat, soil and water projects, reforestation, heritage resources, and recreational needs without increasing funding or revenues.

The comparisons identifying the management costs for the St. Joe Valley Association Proposal are constrained by a limited budget and are decreasing with lower funding levels and less outputs in all areas. The districts continually want to do more ecosystem-based management but have less funding and more constraints. The pilot project, with appropriate authorization, is an opportunity to change how the Forest Service does business. A comparison of how well the stewardship process conducts business is an opportunity to evaluate the accomplishments in restoring, repairing, and improving the ecological needs of the forest. The process will involve the public and includes the cooperation of resource professionals and community to achieve a long-term goal of maintaining and protecting the ecological integrity of the landscape in a cost-efficient manner.

Creating an Organization to Restore Ecosystems

On-the-ground efforts to restore ecosystem integrity such as those outlined in the following table are expensive. While some ecosystem needs can be met by implementing long-term management practices such as commercial thinning to promote early establishment of seral species within younger stands, others activities are costly and are not expected to generate income. Obliteration of roads, for example, may cost $20,000 per mile, and creating pools in streams by building log dams or installing rock gabions can cost over $2,000 each. To complete this work requires an appropriation of monies by Congress specifically directed toward these purposes or a way to generate revenues from other sources.

Stewardship contracting has recently been viewed as a new approach to accomplishing needed on-the-ground work on federal lands. Through this concept, the Forest Service offers a contract to accomplish the objectives. Generally, the work includes ecosystem objectives, such as those identified for the St. Joe sub-basin. Revenues generated are used to offset the cost of the project. If revenues from the project exceed the costs of the project, then the money is retained by the Forest Service to augment other local projects where costs will likely exceed revenues.

Stewardship contracting will be more effective if the goals and accomplishments desired are outlined by the Forest Service initially. This allows the contractors implementing the Forest Stewardship work to develop by experience or creative methods new operational ideas not presently used by the Forest Service. The Forest Service needs to limit the administrative overhead and the use of standardized government contracts, such as treeplanting and prescribed burning, and allow the contractors, through their own methods, to develop

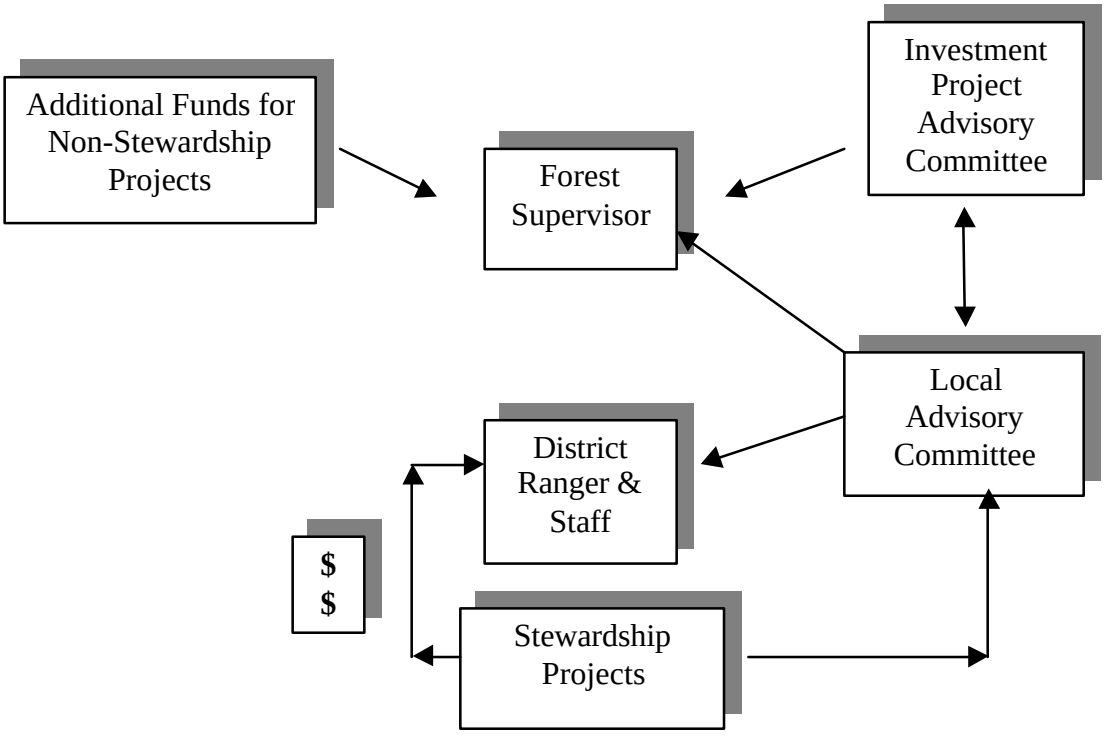
proposals meeting the intent of the project. The Stewardship contracting allows opportunities to enhance the management of public lands. The Stewardship contracting process should resist making the effort a large Request for Proposals (RFP) with imbedded standard contracts. This is an opportunity to implement new ideas, concepts, and business practices on the ground.

In 1998, Congress recognized the validity of this concept by authorizing a number of Stewardship projects throughout the country. In addition, this law provides guidance on how the projects are to be evaluated and implemented, plus exempted them from laws that would have impeded their implementation. The projects are exempt from the Knudsen-Vandenberg law that would have otherwise dictated that a portion of the stewardship contract proceeds be directed toward reforestation of logged areas. All the projects authorized by this law were fully subscribed and are now either being developed or implemented.

The combination of Stewardship Contracts and service contracts pave the way to complete the ecosystem restoration work needed on the St. Joe District. While some additional legislative language or intent may be necessary to reconcile the details of the law with this proposal and to reauthorize additional stewardship projects, the St. Joe Valley Association sees no need to modify other federal statutes or the structure of the Forest Service at this time. The St. Joe District would develop its working plan around a series of stewardship contracts that would be developed locally and approved through the "Investment Project Advisory Committee." As such, the St. Joe District would become the "St. Joe Ecosystem Stewardship Pilot Project."

The following chart shows how to develop and approve a stewardship project:

St. Joe Stewardship Project



In this organizational structure, both the "Investment Project Advisory Committee" and the "Local Advisory Committee" would have a broad membership, consisting of business and civic leaders, environmental interests, sportsmen, industry representatives, and others with an interest in the operation of the pilot project. Their roles would be markedly different. The Local Advisory Committee group would actually conceive and develop the individual stewardship projects, with the help of the district ranger and his or her staff. The "forest" level "Investment Project Advisory Committee" would carry out the actual approval of the projects on the St. Joe.

Project Summary

Changing how the Forest Service does business to help the agency achieve the goals for ecosystem management and those of the local communities will not be an easy task. Different alternatives must be explored. Implementing this pilot project with this community is an opportunity to evaluate a Stewardship Project already in progress.

The St. Joe Ecosystem Stewardship Project is a demonstration that takes advantage of the ecosystem restoration opportunities that the Forest Service has identified for the St. Joe and Congress's recent willingness to use stewardship contracts to finance the needed projects. It will not only help restore the elements of sustainable, resilient terrestrial and aquatic ecosystems in the St. Joe, but also provide employment for those fortunate to live and work in the St. Joe River Basin.

This project was originally submitted by The St. Joe Valley Association. Additionally, this project was further developed and modified with the participation and assistance of Northwest Management, Inc. and the Federal Lands Task Force Working Group.